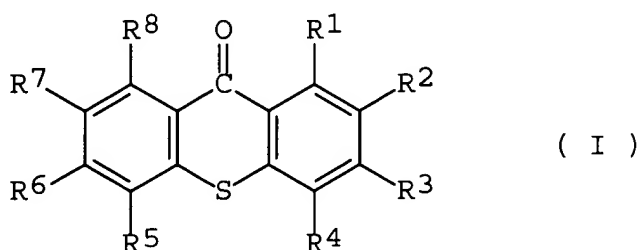


This rejection is traversed for the following reasons.

Present Invention

The present invention relates to an article comprising a substrate comprising a silicon wafer and a positive resist composition comprising a novolac resin; an o-quinonediazide sulfonic acid ester of a compound having a phenolic hydroxyl group; and a thioxanthone compound represented by the following formula (I):



wherein R^1 , R^2 , R^3 , R^4 , R^5 , R^6 , R^7 , R^8 independently represent hydrogen, halogen, alkyl, alkoxy, aryl, carboxyl or alkoxycarbonyl.

Disclosure of Tachikawa '255

Tachikawa '255 discloses a photosensitive member comprising a photosensitive layer containing an o-quinonediazide compound as a photosensitive agent and an additive, characterized in that the additive is selected from a group consisting of quinone

compounds and aromatic ketone compounds, and a method for forming an image using the same.

Tachikawa '255 fails to disclose a silicon wafer.

Disclosure of Aoi '143

Aoi '143 discloses a positive type or negative type light-sensitive composition providing high sensitivity and high resolution in the manufacture of a semiconductor device. The composition contains: (a) a compound which has at least one group capable of decomposing by acid and a solubility that is increased in an alkaline developing solution, (b) a compound which generates acid by an irradiation with actinic rays or radiation, (c) a compound which generates a base at 50 °C or higher, and (d) a resin which is insoluble in water and soluble in an alkaline aqueous solution.

Aoi '143 does not disclose a non-chemical amplification type resist.

Removal of the Rejection over Tachikawa '255 combined with Aoi '143

Aoi '143 relates to a so-called chemical amplification type resist while the present invention and Tachikawa '255 do not relate to such a chemical amplification type resist. The chemical amplification type resist disclosed in Aoi '143

comprises an acid generator that generates an acid by irradiation. The generated acid changes the solubility of the resin. In contrast, the resist in the present invention and Tachikawa '255 do not comprise an acid generator, and the quinonediazide compound itself is decomposed by irradiation and becomes soluble in alkali. Therefore, the compositions and mechanisms giving photo-sensitivity of resists in Aoai '143 and of the present invention or Tachikawa '255 are totally different. Thus, Applicants assert that the motivation for combining the references is completely lacking as Aoai '143 and Tachikawa '255 have features that are incompatible.

Moreover, Aoai '143 mentions, "Further, the difference in affinity of ink to image and substrate can be utilized for application to a lithographic printing plate." (see column 1, lines 31-33 in Aoai '143). There is no description or suggestion that "the difference in affinity of ink to image and substrate" are the same in the resist of Aoai '143 and in the resist in the present invention or Tachikawa '255. Although it may be reasonable for the person of ordinary skill in the art to think "the difference" in a chemical amplification type resist and "the difference" in a non-chemical amplification type resist are insignificant, this really is not the case. This is because "the differences" as those disclosed in the present invention or Tachikawa '255 are substantially different, since, as mentioned

above, the compositions and mechanisms giving the photo-sensitivity of resists are also quite different. Accordingly, Applicants again assert that the motivation for combining the references are lacking (for an example of the motivation needed to combine references see *In re Dembiczak*, 50 USPQ2d 1614 (Fed. Cir. 1999)).

Moreover, Aoai '143 does not disclose or suggest a non-chemical amplification type resist, such as those disclosed in the present invention or Tachikawa '255. Applicants take strong exception to the Examiner's assertion that a silicon wafer and a printing plate substrate are analogous based on the desired application. In actuality, a silicon wafer and a printing plate substrate are quite different and one of ordinary skill in the art would not assert that they are analogous.

As was mentioned in the reply of May 13, 2002, Tachikawa '255 does not disclose an article comprising a silicone wafer, and the properties and effects desired for a resist coated on a silicone wafer and for a resist for a lithographic plate are different. For example, "the difference in affinity of ink to image and substrate" is not required for a resist coated on a silicone wafer. Therefore, one of ordinary skill would never assert that a printing plate substrate and a silicon wafer are equivalent or analogous. Thus, the present invention cannot be considered obvious over Tachikawa '255.

To conclude, for a non-chemical amplification type resist as is disclosed in the present invention, expansion of the spectral range and the activation of the acid generators are not required, but improvement of resolution occurs, as shown in Table 1, page 15. Therefore, a person of ordinary skill in the art would not be motivated to use the resist disclosed in Tachikawa '255 as a resist coated on a silicone wafer to improve the resolution. This is the case despite the fact that Tachikawa '255 mentions expansion of the spectral range and the activation of the acid generators that can be attained by the addition of the sensitizer. Accordingly, the present invention cannot be rendered obvious over Tachikawa '255.

For the reasons above, the instant invention cannot be rendered obvious by the disclosures of Tachikawa '255 combined with Aoai '143 because one of ordinary skill in the art would not combine Tachikawa '255 and Aoai '143. This is because these two references have inconsistent features that preclude their combination. Accordingly, Applicants submit that the rejection is inapposite. Withdrawal of the rejection is warranted and respectfully requested.

With the above remarks, it is believed that the claims, as they now stand, define patentable subject matter such that a passage of the instant invention to allowance is warranted. A Notice to that effect is earnestly solicited.

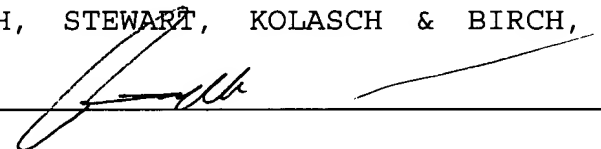
If any questions remain regarding the above matters, please contact Applicant's representative, T. Benjamin Schroeder (Reg. No. 50,990), in the Washington metropolitan area at the phone number listed below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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By


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